[Add the Name of Individual]

Monitoring and Reporting Program Plan

Prepared by: [Insert Name Here]

[DATE]

(Note: Instructions are given in bold type. Make sure to complete all underlined sections and remove the underlining upon completion. Also, erase the instructions as you complete the MRP for your specific project.)

Please read the entirety of this document. This document describes the responsibilities of the enrollee to meet the monitoring and reporting requirements under the Conditional Waiver of Waste Discharge requirements for Discharges from Irrigated Lands within the Los Angels Region (Order No. R4-2005-0080).

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1.0 PROJECT PERSONNEL

Project Personnel

If there are any changes regarding project personnel the Regional Board will be notified and this document will be updated. **[Please fill in the names of appropriate personnel]**

Title	Name (Affiliation)	Phone Number
Operation Manager		
Primary Field Sampler		
Laboratory Manager		
Laboratory QA/QC officer		
Environmental Scientist	Regional Board Staff Yanjie Chu Rebecca Veiga Nascimento	 213-576-6681 213-576-6661

2.0 INTRODUCTION

The Los Angeles Regional Water Quality Control Board (Los Angeles Regional Board) is a State of California agency that regulates water quality within the coastal watersheds of Ventura and Los Angeles Counties under the authorities of the Federal Clean Water Act and State Porter Cologne Water Quality Control Act. The area under the jurisdiction of the Los Angels Regional Board is known as the Los Angeles Region.

In the Los Angeles Region, irrigated crops are the dominant agricultural land use. Water quality impacts associated with agriculture can be primarily traced to discharges resulting from irrigation water or stormwater. These discharges typically contain pollutants that have been imported or introduced into the

irrigation or stormwater; in addition irrigation practices can mobilize and or concentrate some pollutants. In order to prevent these potentially polluted discharges from impacting the beneficial uses of water bodies within the Region the LA-Regional Board developed a Conditional Waiver for Irrigated Lands as mandated by recent changes in state law and policy.

On November 3, 2005 the Los Angeles Regional Water Quality Control Board adopted a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region (Order No. R4-2005-0080). The goal of this program is to protect and improve water quality and attain water quality objectives in the receiving water bodies. This program has been adopted in its current format for five years. As a condition of the Conditional Waiver program, individual dischargers are required to develop monitoring programs to assess the impacts of discharges from irrigated lands.

The purpose of this Monitoring and Reporting Program (MRP) plan is to monitor and report the discharge of constituents of concern (COCs) in irrigation return flows/tile drains and stormwater. This MRP plan describes the monitoring efforts that will be undertaken by **[insert name here]** for compliance with the Conditional Waiver, Order No. R4-2005-0080. Section 1 of this document included the approval and personnel page; Section 2 is the introduction. The following sections are outlined as follows.

Section 3 – Monitoring Locations
Section 4 - Project Tasks and Schedule
Section 5 – Methods (field and laboratory)
Section 6 - Data Management and Reporting

3.0 MONITORING LOCATIONS

SITE DESCRIPTION

[Please provide a short site description include information such as:

Site location

Size of site

Land use – crop and cultivation practices

Fertilizer and pesticide (or pest control) application practices

Water supply and irrigation practices

Describe nearby waterbodies (including cement lined channels)]

TYPE OF DISCHARGE

Discharge generated from the site

☐ irrigation and stormwater runoff

☐ stormwater runoff only

SAMPLING SITE

Sampling site is located at the

☐ Edge of property

☐ Within the receiving water (within 50 ft of the edge of the property)

Please provide the name of the receiving water.

_____

☐ Other (Please specify):

_____

Please provide the physical address and or GPS coordinates (latitude and longitude) of the sampling site.

[Please describe the scientific rationale for the sampling location selection process.]

Example: Based on the general hydrology of the site the lowest point of discharge for water to leave the site was chosen as the sampling location.

[Please attach a map that shows the location of the proposed monitoring site(s). Examples of maps that can be used would be a copy of the appropriate Thomas Guide page (or other street map), or printed topographic map from a web site such as www.topozone.com, www.earth.google.com. It is copiers' responsibility that permission is granted and the copy is in compliance with copyrights. The location of the site should be marked on the map along with nearby potentially affected waters of the state. Waters of the state include cement lined and other flood control channels. A hand drawn map depicting the property and the location of sampling site(s) will be accepted along with the street map or topographic map.]

CONSTITUENTS MONITORED

Table 1 presents the constituents that will be monitored at each monitoring site.

Table 1 Constituents to be monitored

CONSTITUENT	UNIT
Flow	CFS (Ft^3/Sec)
PH	pH units
Temperature	^0F
Dissolved Oxygen	mg/L
Turbidity	NTU
Total Dissolved Solids	mg/L
Total Suspended Solids	mg/L
Chloride	mg/L
Ammonia	mg/L
Nitrate-Nitrogen	mg/L
Toxaphene	µg/L
Pyrethroids	µg/L
Toxicity	TU_c
Phosphate	mg/L
Sulfate	mg/L
Organophosphate Suite[1]	µg/L
Organochlorines Suite[2]	µg/L

The chronic toxicity testing will be conducted for three test species: fathead minnow, ceriodaphnia (water flea) and green algae. After one toxicity sample has

[1] Oragnophosphate Suite: Bolstar, Chlorpyrifos, Demeton, Diazinon, Dichloorvos, Dimethoate, Disulfoton, Ethoprop, Fenchlorophos,.Fensulfothion, Fenthion, Malathion, Merphos, Methyl Parathion, Mevinphos, Phorate, Tetrachlorvinphos, Tokuthion, Trichloronate

[2] Organochlorine Suite: 2,4' – DDD, 2,4' – DDE, 2,4'DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, BHC-alpha, BHC-beta, BHC-delta, BHC-gamma, Chlordane-alpha, Chlordane-gamma, Dieldrin, Endosulfan sufate, Endosulfan-I, Endosulfan-II, Endrin, Endrin Aldehyde, Endrin Ketone

been collected and analyzed in the first year, the most sensitive species will be selected for subsequent toxicity monitoring.

SAMPLE COLLECTION

Sample containers will be cleaned by the laboratory and delivered to the field personnel before each sampling event. The containers will be labeled with the following information:

- Sample ID
- Location ID
- Date
- Time
- Initials of sample collector

The label information will be completed before filling the container with sample water. All samples will be collected as grabs, by wading and filling the container directly. Alternative methods including extension of sampling devices from the bank will be used where needed, again following procedures delineated in SWAMP procedures. Field operators will follow Surface Water Ambient Monitoring Program (SWAMP) Standard Operating Procedures. Detailed information on these procedures will be provided to Operation Managers as needed. All containers should be provided by the laboratory and shall be rinsed three times with ambient water except for any container that contains preservative. Devices will be decontaminated prior to collection at each sampling site. If sampling devices have to be used, it will be noted in the field data sheet. Field operators will fill out the Sampling Log part of the data sheet immediately after sampling. Water samples will be stored appropriately and delivered to the laboratory for analysis within 24 hours of sample collection.

QUALITY ASSURANCE QUALITY CONTROL

In addition to regular samples, field blanks and field duplicates will be used to ensure data quality. Likewise the laboratory will employ the use of equipment

blanks and matrix spikes. Quality assurance and quality control (QAQC) measures will be conducted at a frequency of about 1 per 20 normal samples, or 1 per sampling event, whichever is greater. The laboratory will report the results from QAQC samples along with the results of the regular field samples.

4.0 PROJECT TASKS AND SCHEDULE

The monitoring required by the Conditional Waiver program will be conducted annually after issuance of a Notice of Applicability by the Executive Officer of the Regional Board. The monitoring will be implemented in two phases. Phase 1 the first 2 monitoring years requires 4 sampling events (2 wet season and 2 dry season); phase 2 is the last 2 monitoring years and requires 2 sampling events (1 wet season and 1 dry season). Toxicity testing is scheduled once during the wet season and once during the dry season during phase 1 monitoring, after which the Executive Officer may modify the requirement. Discharges that are classified as typical participate in monitoring activities on an annual basis, while low risk discharges participated in monitoring activities in the first and third monitoring years.

Are you developing this monitoring plan as a low risk or typical discharger? Discharger classification is based on the information from the NOI form.

☐ Low Risk Discharger
☐ Typical Discharger

The primary tasks presented in this MRP plan are monitoring and the reporting of the monitoring results to the Regional Board. The table below shows an anticipated schedule for when monitoring will be conducted and when annual reports demonstrating the monitoring results are due to the Regional Board.

Table. 2 Schedule for Monitoring and Reporting

Task	**Schedule**	**Sampling Schedule**		
		Wet Season	**Dry Season**	**Sampling Events/Season**
Submit NOI, MRP, QAPP	August 3, 2006			
Receive NOA from Regional Board	December 31, 2006			
Conduct Monitoring* - year 1		Jan. - May 15, 2007	May 15 - Oct. 15,2007	2
Submit Annual Monitoring Report - year 1	December 31, 2007			
Conduct Monitoring* - year 2		Oct. 15, 2007 - May 15, 2008	May 15 - Oct. 15, 2008	2
Submit Annual Monitoring Report - year 2	December 31, 2008			
Conduct Monitoring - year 3		Oct. 15, 2008 - May 15, 2009	May 15 - Oct. 15, 2009	1
Submit Annual Monitoring Report - year 3	December 31, 2009			
Conduct Monitoring - year 4		Oct. 15, 2009 - May 15, 2010	May 15 - Oct. 15, 2010	1
Submit Annual Monitoring Report - year 4	December 31, 2010			
* - Toxicity testing required once per season				
Gray cells indicated monitoring required for low risk dischargers				

5.0 FIELD AND LABORATORY METHODS

[Regional Board staff will provide information on SWAMP field procedures and basic sampling and monitoring concepts.]

FIELD METHODS

Methods for sample collection in the field will be done according to SWAMP procedures.

LABORATORY METHODS

Please provide the contact information for the laboratory that has been retained to conduct sample analysis. The laboratory shall be certified by the California Department of Health Services.

Name	
Address	
Phone	Contact Name
DHS Laboratory Certification No.	Expiration Date

Analytical methods and detection limits for each constituent shall be US EPA Standard or Approved Methods, examples include the following:

- *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA-600/4-85 054)
- *U.S. EPA Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020, third edition, 1983)
- *Methods for Determination of Organic Compounds in Drinking Water* (EPA-600/4-88/039)
- *Standard Methods for the Examination of Water and Wastewater*

- *USEPA. 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition. Office of Water, Washington, D.C. EPA-821-R-02-012*

- *USEPA. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition. Office of Water, Washington, D.C. EPA-821-R-02-013.*

- *USEPA. 1994. Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates. Office of Research and Development, Washington, D.C. EPA-600-R-94-024.*

6.0 DATA MANAGEMENT AND REPORTING

With each sampling event there shall be a field data/sample log sheet. **[An example is provided at the end of this template]** A copy of this document will be retained in the discharger's records and a copy shall be submitted to the Regional Board along with the monitoring results. The discharger shall also retain a copy of the monitoring results for his/her records. An Annual Monitoring Report will be submitted to Regional Board for approval by the Executive Officer.

The Annual Monitoring Report will include the following Sections:

1. Introduction: objectives of Annual Monitoring Report
2. Monitoring: samples collected, location, objective and analytical methods
3. Results and discussion:
    - Data presented in clear tabular form
    - Data summarized to demonstrate compliance or noncompliance
    - Data comparison to benchmark values in Conditional Waiver (Order No. R4-2005-0080, Section G).
    - Associated laboratory data on QAQC samples
4. Copy of field data/sample log sheet and chain of custody form
5. Affirm in writing that analyses were conducted by a certified laboratory
6. Perjury statement
7. References and appendices, if necessary

Analytical data from the laboratory shall be reported with one of the following methods, as the case may be:

1. An actual numerical value for sample results greater than or equal to the practical quantification limit (PQL); or

2. “Detected, but Not Quantified (DNQ)” if results are greater than or equal to the laboratory’s method detection limits (MDL) but less than the PQL. The estimated chemical concentration of the sample shall also be reported; or

3. “Not-Detected (ND)” for sample result less than the laboratory’s MDL with the MDL indicated for the analytical method used.

The PQL employed for an effluent analysis shall be lower than the benchmark value established for a given parameter, unless the discharger can demonstrate that a particular benchmark limit is not attainable and obtains approval for a higher limit from the Executive Officer.

Los Angeles Region Conditional Waiver for Irrigated Lands — Field/Sample Log

Operation Name: Sampling Event: DRY WET (circle one)

Date: Sampling Personnel (print and sign):

Weather Conditions: Organization:

Sample Number	Sample Collected (mark)		Sample Type	Time	Sampling Device	Sample Container
	Field Measurements	Lab Sample	(Normal/QC)	(hhmm)	(grab/other)	(glass/plastic)

If this is a dry weather sampling event and there was no irrigation discharges available for sampling please provide the information below as documentation. Please note that dry weather sampling is required to be conducted on the same day as irrigation near the end of the irrigation cycle.

Date of Irrigation	
Time of Irrigation	
Length of irrigation cycle	
Time of Sample Investigation	

Los Angeles Region Conditional Waiver for Irrigated Lands **Field Data Sheet**

Operation Name:	Address:		
Date:	Weather Conditions:	Crop Type:	
Type of Irrigation:	Stream Width:	Stream Depth:	
Pesticide Application Time/Type:			
Fertilizer Application Time/Type			
Location of Tributaries:		Sampling Event:	DRY / WET (Circle one)

Sample Number	Location	Flow Rate	Temperature	pH	Dissolved Oxygen	Turbidity
		cfs	°F		mg/L	NTU

Sampling Personnel:

(Print) (Sign)

Organization: